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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
STEIN, JULIE E	

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/748,165	HAYASHI, SADAFUKU	
	Examiner	Art Unit	
	Julie E. Stein, Esq.	2688	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3 and 28-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3 and 28-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/31/03 and 22 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. In view of Applicant's submission of Figure 6 and arguments as to the application of the present invention to Figure 5, the objection to the drawings is withdrawn.

Specification

3. In view of the Applicant's amendments to the specification, the objections to the specification are withdrawn.

Claim Objections

4. In view of the cancellation of the previous claims, the previous objections to the claims are withdrawn. However, new objections are now presented.

5. Claim 3 is objected to because of the following informalities: the subject matter of claim 3 appears to be incorrect. Either the subject matter or the dependency is incorrect. Appropriate correction is required. For purposes of prior art examination, the Examiner has assumed that the dependency is correct and that the subject matter should be a method.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 30 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation of "a *machine* readable medium" is considered new matter as there is no indication or support within the originally filed specification that the Applicant had possession of such a broad form of readable medium. On page 5 of the originally filed application, a computer program is recited, not a "machine" program, which might include, for example a bar code.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The recitation of a system claim, which then further includes a very lengthy "wherein" clause, see page 4 to 5 of the amended claims, renders claim 28 indefinite as it is unclear whether the claim is drawn to the system, which recites radio terminals and their components or a conditional method based on movement of a radio terminal not positively claimed as part of the system.

Claim Rejections - 35 USC § 101

11. In view of the cancellation of claim 27, the rejection under 35 USC 101 is withdrawn.

12. However, the following 101 rejection is now presented.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 30 is drawn to a "machine readable medium" having stored thereon a program. This has been determined to be non-statutory subject matter. It is suggested that Applicant review MPEP section 2106 and perhaps and material found relating so patentably subject matter on the USPTO's web site.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 2-3 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,701,155 to Sarkkinen et al. in view of UK Patent Application No. 2371179 A Ericsson.

Sarkkinen teaches all the elements of independent claim 28, including a mobile communication system (Figure 1) for delivering identical data from a data source to a plurality of radio terminals (column 1, lines 55 to 60), said mobile communication system comprising a plurality of radio network controllers (Figure 1, elements 30 and 35), each controller including circuitry for counting the number of radio terminals connected to such controller to receive the data from the data source (it would have been obvious to one of ordinary skill in the art at the time the invention was made for the RNCs to count the number of UEs because it would allow the RNCs to keep track of the number of UEs in a given cell and thus calculate various network parameters, such as loading; and see, column 5, lines 33 to 35 and column 6, lines 23 to 26, which teaches a UE entering into a new RNC cell and the RNC updating the SGSN) and circuitry for controlling delivery of the data within an associated cell (Figures 6 and 7 and corresponding descriptions in columns 7 to 8), wherein:

when a radio terminal within a first cell is connected to the controller associated with the first cell, upon movement of the radio terminal from the first cell to a second cell, the radio terminal establishes connection to the controller associated with the second cell (the Examiner takes Official Notice that this is soft handoff and is well known in the art and is also shown in Ericsson);

in response to connection of the radio terminal to the controller associated with the second cell, the count of radio terminals connected to the controller associated with the first cell is decremented and the count of radio terminals connected to the controller associated with the second cell is incremented;

However, Sarkkinen does not explicitly teach the above recitation. But, Sarkkinen does teach a RNC sending an indication to the SGSN when a new UE moves into the RNC's cell. See, column 5, lines 33 to 35 and column 6, lines 23 to 26. Also, Ericsson teaches a first RNC updating a second RNC when a user moves from the second RNC to the first RNC. Ericsson, page 4, lines 21 to 29. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the teaching of Sarkkinen, which includes a system, which multicasts to users via RNCs with the method of Ericsson, by having the RNCs themselves update each other when mobile users move between RNCs by sending update messages directly between RNCs because this would lessen the burden on the SGSN taught in Sarkkinen. In addition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to understand that while the RNCs were updating each other, they would also keep count of the UEs in order to better keep track of various network parameters, such as loading.

the number of radio terminals connected to the controller associated with the second cell is compared with a predetermined number (implicit based on the determination of whether the number of UEs is "very low" (column 7, line 52));

if the number of radio terminals connected to the controller associated with the second cell is less than the predetermined number, a dedicated channel is set between the radio terminal and the control associated with the second cell (column 7, lines 51 to 54);

if the number of radio terminals connected to the controller associated with the second cell is equal to or greater than the predetermined number, a common channel is set between the radio terminal and the control associated with the second cell (Id., if the number of terminals is not "very low" then a multicast is established, see, column 7, lines 48 to 51); and

the data is delivered from the controller associated with the second cell to the radio terminal over the set channel (column 7, lines 59 to 67).

The rejection of claim 28 is hereby incorporated. Sarkkinen in view of Ericsson teaches all the steps of independent claim 29, including a method of operating a mobile communication system (Figure 1) to deliver identical data from a data source to a plurality of radio terminals (column 1, lines 55 to 60), the mobile communication system including a plurality of radio network controllers (Figure 1, elements 30 and 35), each controller maintaining a count of the number of radio terminals connected to such controller to receive the data from the data source (see above) and controlling delivery of the data within an associated cell (Figures 6 and 7 and corresponding descriptions in columns 7 to 8), said method comprising:

connecting a radio terminal within a first cell to the controller associated with the first cell (the Examiner takes Official Notice that this is soft handoff and is well known in the art and is also shown in Ericsson);

upon movement of the radio terminal from the first cell to a second cell, connecting the radio terminal to the controller associated with the second cell (Id.);

decrementing the count of radio terminals connected to the controller associated with the first cell see above);

incrementing the count of radio terminals connected to the controller associated with the second cell (Id.);

comparing the number of radio terminals connected to the controller associated with the second cell with a predetermined number (implicit based on the determination of whether the number of UEs is "very low" (column 7, line 52));

if the number of radio terminals connected to the controller associated with the second cell is less than the predetermined number, setting a dedicated channel between the radio terminal and the control associated with the second cell (column 7, lines 51 to 54);

if the number of radio terminals connected to the controller associated with the second cell is equal to or greater than the predetermined number, setting a common channel between the radio terminal and the control associated with the second cell (Id., if the number of terminals is not "very low" then a multicast is established, see, column 7, lines 48 to 51); and

delivering the data from the controller associated with the second cell to the radio terminal over the set channel (column 7, lines 59 to 67).

The rejections of claims 28 and 29 are hereby incorporated. Sarkkinen in view of Ericsson teaches all the steps of independent claim 30, including a machine readable medium having stored thereon a program for causing a computer to execute an operation control method to cause a mobile communication system (see above) to

deliver identical data from a data source to a plurality of radio terminals (see above), the mobile communication system including a plurality of radio network controllers (see above), each controller maintaining a count of the number of radio terminals connected to such controller to receive the data from the data source (see above) and controlling delivery of the data within an associated cell (see above), said method comprising:

connecting a radio terminal within a first cell to the controller associated with the first cell (see above);

upon movement of the radio terminal from the first cell to a second cell, connecting the radio terminal to the controller associated with the second cell (see above);

decrementing the count of radio terminals connected to the controller associated with the first cell (see above);

incrementing the count of radio terminals connected to the controller associated with the second cell (see above);

comparing the number of radio terminals connected to the controller associated with the second cell with a predetermined number (see above);

if the number of radio terminals connected to the controller associated with the second cell is less than the predetermined number, setting a dedicated channel between the radio terminal and the control associated with the second cell (see above);

if the number of radio terminals connected to the controller associated with the second cell is equal to or greater than the predetermined number, setting a common

channel between the radio terminal and the control associated with the second cell (see above); and

delivering the data from the controller associated with the second cell to the radio terminal over the set channel (see above).

Sarkkinen in view of Ericsson teaches all the elements/steps of claims 2 and 31, including wherein the movement of the radio terminal between radio network controllers is movement during a period before data reception and after said radio terminal has joined the service. See, Sarkkinen, column 6, lines 1 to 35 and column 7, lines 48 to 67.

Sarkkinen in view of Ericsson teaches all the elements/steps of claims 3 and 32, including wherein the movement of the radio terminal is movement during an idle mode or a standby state. See, Id.

Response to Arguments

Applicant's arguments filed 12/22/05 have been fully considered but they are not persuasive.

16. Applicant argues that Sarkkinen does not teach or suggest counting the UEs or comparing the number of UEs to a predetermined number in order to determine whether to establish a point-to-point connection or point-to-multipoint connection.

17. However, the Examiner respectfully disagrees. As discussed above, while Sarkkinen in view of Ericsson does not explicitly teach that each time a UE enters a cell (or leaves a cell) the RNC counts the UE, Ericsson does teach that the RNCs communicate the movement of each UE to the other and Sarkkinen teaches that when

a new UE enters a cell, the RNC communicates this to the SGSN. See Ericsson, page 4, lines 21 to 29 and Sarkkinen, column 5, lines 33-35, respectively. In addition, the Examiner states above that one of ordinary skill in the art at the time the invention was made would have understood that a counter would have been included at the RNCs because count information relating to the UEs would have been helpful to the RNCs for various reasons, including to calculate load information and the like.

18. As to whether Sarkkinen teaches comparing the number of UEs to a predetermined number, the Examiner submits that it has to, otherwise, the concept of a "very low" number found in column 7, line 52 would be useless. While this number may change according to the demands of a given system, it still would have to be defined according to a set threshold number in order to determine when to establish a point-to-multicast connection or a point-to-point connection.

19. As to the statement in column 8, lines 61 to 63, the Examiner submits, based on the reference as a whole, the statement is a misprint and should indicate that the point-to-multicast connection may be efficient when the number of service users in a cell is very high.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie E. Stein, Esq. whose telephone number is (571) 272-7897. The examiner can normally be reached on M-F (8:30 am-5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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